

KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 10

### REMARKS

This Amendment is responsive to the Office Action identified above, and is further responsive in any other manner indicated below.

### PENDING CLAIMS

Claims 1-20 were pending in the application, under consideration and subject to examination at the time of the Office Action. Unrelated to any prior art, scope or rejection, appropriate Claims have been amended (without prejudice or disclaimer) or added in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, the amendments to the claims are unrelated to any prior art or scope adjustment, and are simply clarified claims in which Applicant is presently interested. At entry of this paper, Claims 1-26 are now pending in the application for consideration and examination.

### CLAIM OBJECTIONS OBVIATED VIA CLAIM AMENDMENT

Claims 6, 13 and 15 were objected to because of the Office Action concerns listed at Item 4 on page 2 of the Office Action. As amendments have been made where appropriate in order to address each of the Office Action listed concerns, reconsideration and withdrawal of the claim objection are respectfully requested.

### REJECTIONS UNDER 35 USC §§102 AND 103 - TRAVERSED

All 35 USC rejections (*i.e.*, the 35 USC §102 rejection of Claims 1-5 and 7 as being anticipated by Nakata (US 6,215,321 B1); the §102 rejection of Claims 8-20 as

KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 11

being anticipated by Kohno *et al.* (US 6,614,246 B1); the §103 rejection of Claim 6 as being unpatentable over Nakata in view of Potter (US 6,028,437 A)) are respectfully traversed. Such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims and as support for Applicant's new claims.

All descriptions of Applicants disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated herein by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed.

The requirements to support a rejection under 35 USC §102 as indicated in the decision of *In re Robertson*, 49 USPQ2d 1949 (Fed. Cir. 1999), require that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. Moreover, the Court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

As set out in the decision *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988), the court points out that the PTO has the burden under §103 to establish a *prima facie* case of obviousness, and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill

KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 12

in the art would lead that individual to combine the relevant teachings of the references.

Furthermore, such requirements have been clarified in the recent decision in *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002), wherein the Court, in reversing an obviousness rejection, indicated that deficiencies of the cited reference cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge."

The Court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of reference, simply to "[use] that which the inventor taught against its teacher."...Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.  
(emphasis added)

Therefore, in order to properly support a §102 anticipation-type rejection, the reference must teach the specific limitations of the claimed invention. In order to properly support a §103 obviousness-type rejection, the reference not only must suggest the claimed features, but also must contain the motivation for modifying the art to arrive at an approximation of the claimed features. However, the cited art does not adequately support either a §102 anticipation-type rejection or a §103 obviousness-type rejection because it does not, at minimum, disclose (or suggest) limitations of Applicant's claimed invention as discussed in the following remarks

KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 13

from Applicant's foreign representative in support of traversal of the rejection and patentability of Applicant's claims.

An important novel feature/limitation of the present invention (as defined by clarified Claims 1, 8 and 18) over Nakata, Potter and Kohno *et al.*, discloses that "a pitch between electrode pads in the second surface of the probe sheet is wider than that between contact terminals in the first surface of the probe sheet facing a wafer (an object to be inspected) at an opposite side thereof to the second surface."

The probe sheet, having such an asymmetry of the pitches of the contact terminals and the electrode pads between both surfaces, is a structural feature of the present invention, and cannot be derived by the teaching of Nakata, Potter and Kohno *et al.* The probe sheet in the present invention should be interpreted as a sheet-like member having contact terminals formed on a surface thereof and constituting the probe card together with the other substrate member. Therefore, the structural feature of the present invention should appear at both surfaces of the sheet-like member.

Nakata teaches a polyimide thin film having bumps as contact terminals and constituting the probe card together with a localized anisotropic conductive film and a multi-layer wiring board. However, the bumps pierce the polyimide thin film straightly so as to keep a pitch therebetween at both sides of the polyimide thin film.

Kohno *et al.* teaches a main base having probes as contact terminals provided at a side thereof and secondary electrodes drawn to another side thereof corresponding to the probes respectively. The main base constitutes a probe structure together with an interposer and a substrate. Each of the probes is mounted

KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 14

on a beam positioning the probes flexibly, and are connected to one of the secondary electrodes via the beam, as shown in Fig. 1 of Kohno *et al.* The secondary electrodes are arranged in a direction in which the probes are arranged by the same pitch as that between the probes, while positions of the secondary electrodes are shifted alternately in another direction transverse to the direction of the arrangement of the probes. Kohno *et al.* teaches to enlarge the pitch between the probes in the interposer as shown in Figs. 2B and 5B of Kohno *et al.*

Potter teaches a membrane head having probe tips provided at a side thereof and constituting the probe head assembly, together with a package base and a package lid. However, Potter fails to teach electrodes arranged at another side of the membrane head.

Reviewing the polyimide thin film taught by Nakata, the main base taught by Kohno *et al.*, and the membrane head taught by Potter, the necessity to fabricate such wirings as the connection electrode parts and pitch extension wires therein, as in the present invention, cannot be derived from the applied art because Nakata and Kohno *et al.* enlarge pitches of bumps and probes by other structures.

Therefore, the present invention is not anticipated by either teaching of Nakata or Kohno *et al.*, and is not obvious over Potter in the view of Nakata and Kohno *et al.*

In addition to the above arguments from Applicant's foreign representative, it is respectfully submitted that added independent Claim 23 contains addition features/limitations for consideration. More particularly, such independent claim additionally recites "wherein ones of said electrode pads extending in a direction

KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 15

away from an area of the contact terminals are laid out in an array having at least three rows extending at least somewhat parallel to the area." In using Applicant's original Figures for examples, an extreme left-hand side of FIG. 3B shows three rows extending away from a contact terminal area. In contrast, an extreme right-hand side of FIG. 3B shows four rows extending away. Still further, each of the rectangular probe sheet areas within a middle portion of FIG. 3B show seven rows extending away from contact terminal areas. Such arrangements are advantageous in that they facilitate dense pitches of contact terminals within the contact terminal area.

Next, added Claim 24 recites that "the electrode pads of a subject row of the rows are staggered with respect to the electrode pads of a neighboring row." Such is advantageous in maximizing spacing between all neighboring electrode pads so as to minimize capacitance problems.

Added Claim 25 recites the wirings as serpentine wirings, and ones of the serpentine wirings trace serpentine paths between the electrode pads. Relatedly, Claim 26 recites "wherein a pitch between ones of the serpentine wirings varies extending in the direction away from the area of the contact terminals." Such features/limitations are advantageous in facilitating maximized wiring densities, while at the same time minimizing impedance problems between neighboring wirings.

As a result of all of the foregoing, it is respectfully submitted that the applied art would not support either a §102 anticipation-type rejection or a §103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and

KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 16

withdrawal of such §§102 and 103 rejections, and express written allowance of all of the rejected claims, are respectfully requested.

### RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer of any scope or subject matter. Further, Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, *i.e.*, Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

### EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local D.C. area number 703-312-6600, to discuss an Examiner's Amendment or other suggested actions for accelerating prosecution and moving the present application to allowance.

### CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the

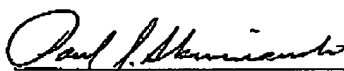
KASUKABE *et al.*, SN 10/676,609  
Amdt. dated 03/22/2005  
Reply to OA mailed 09/22/2004

Dkt. 500.43175X00/W1216-01ER  
Page 17

application are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

A Petition for extension of the shortened statutory period for response set by the 22 September 2004 Office Action is being submitted concurrently herewith. To whatever other extent is actually necessary, Applicant respectfully petitions the Commissioner for an extension of time under 37 CFR §1.136. A Form PTO-2038 also is being filed concurrently herewith and authorizes Petition and claim fees. Please charge any actual fee deficiency to ATS&K Deposit Account No. 01-2135 (as Case No. 500.43175X00).

Respectfully submitted,



Paul J. Skwierawski  
Registration No. 32,173  
ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 North Seventeenth Street, Suite 1800  
Arlington, Virginia 22209-3873, USA  
Telephone 703-312-6600  
Facsimile 703-312-6666

Concurrent Submissions:  
Petition for Extension of Time  
PTO-2038 (Fee Codes 1202/1253)